TUNING INDICATOR

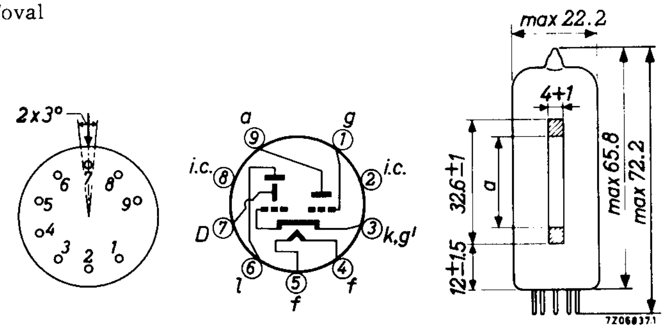
Tuning indicator tube.

HEATING: Indirect by A.C. or D.C.; series or parallel supply

Heater voltage	V_f	6.3	V
Heater current	I_f	300	mA

DIMENSIONS AND CONNECTIONS Dimensions in mm

Base: Noval



The arrow near pin 7 indicates the viewing direction.

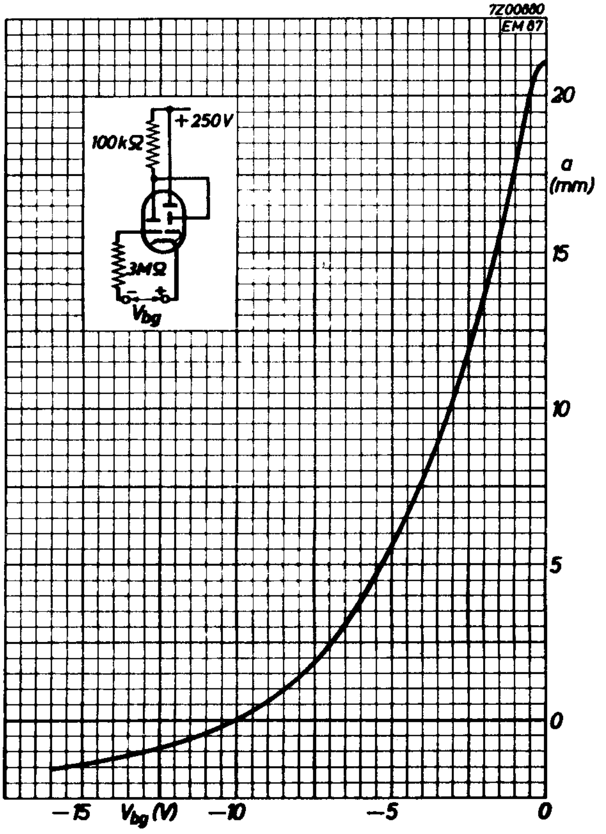
OPERATING CHARACTERISTICS (D connected to a)

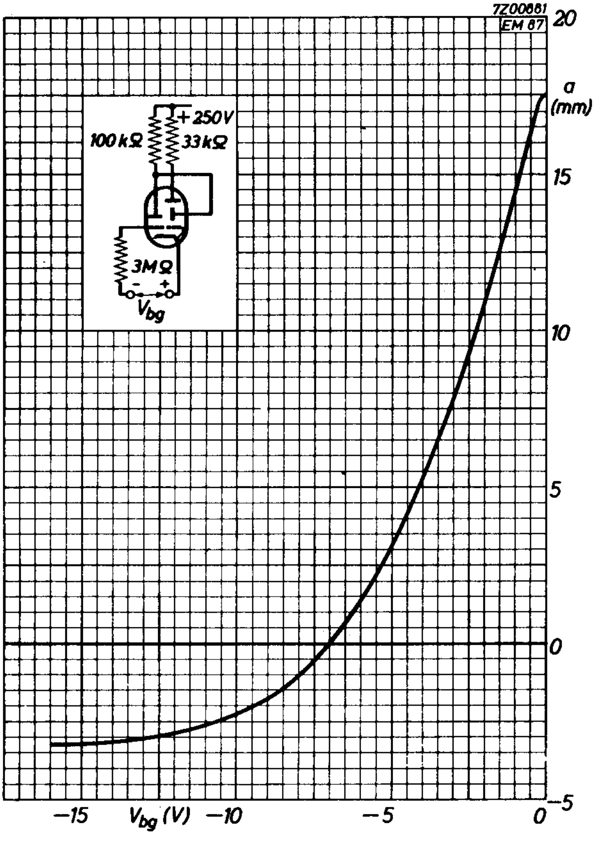
Supply voltage	V_b		250		V
Luminescent screen voltage	V_ℓ		250		V
Anode and deflection electrode resistor	$R_{a,D}$		100		kΩ
Grid resistor	R_g		3		MΩ
Grid supply voltage	V_{bg}	0	−10	−15	V
Anode and deflection electrode current	I_{a+D}	2.0	0.5	0.2	mA
Luminescent screen current	I_ℓ	1.0	1.8	2.0	mA
Shadow length	a	21	0	−1.5	mm[1])

[1]) A negative value of "a" means overlapping:
The grid bias for a = o is reduced by decreasing V_ℓ.
The measure of overlapping at V_g = −15 V will then increase (see page 4).

LIMITING VALUES (Design centre rating system)

Anode voltage	V_{a_o}	max. 550	V
	V_a	max. 300	V
Anode dissipation	W_a	max. 0.6	W
Deflection electrode voltage	V_{D_o}	max. 550	V
	V_D	max. 300	V
Luminescent screen voltage	$V_{\ell o}$	max. 550	V
	V_ℓ	max. 300	V
	V_ℓ	min. 170	V
Grid resistor	R_g	max. 3	MΩ
Cathode current	I_k	max. 5	mA
Cathode to heater voltage	V_{kf}	max. 250	V
Bulb temperature	t_{bulb}	max. 120	°C


7Z00680
EM 87
+250V
100kΩ
3MΩ
Vbg
a
(mm)
20
15
10
5
0
−15
Vbg (V)
−10
−5
0


7Z00861
EM 87
+250V
100kΩ
33kΩ
3MΩ
-
+
V_{bg}
a
(mm)
20
15
10
5
0
−5
−15
V_{bg} (V)
−10
−5
0

PHILIPS

Data handbook

PHILIPS

Electronic components and materials

EM87

page	sheet	date
1	1	1969.12
2	2	1869.01
3	3	1869.01
4	4	1869.01
5	FP	1999.08.10